

ABSTRACT OF THE DISCLOSURE

Regulating compression capability to a load is performed by an inverter (15) that regulates revolution number of an electric motor (11). This makes unload control in capability regulation unnecessary, preventing operational efficiency from lowering. Further, 5 a capacity control valve for capacity control is eliminated for a simplified valve control mechanism. Regulating a variable inner volume ratio achieves the highest compressor efficiency corresponding to operating condition (capability). When a low inner volume ratio command is issued, a slide valve (19) is moved by a compression section controller (27) in an axial direction toward the electric motor (11). This advances completion time of 10 a compression step to advance discharge of a compressed gas. When a high inner volume ratio command is issued, the slide valve (19) is moved in an axial direction toward a piston (25), which delays time of completion of compression step to delay discharge of a compressed gas.